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## JPU Meets in Colorado

New cochairmen, Gerald Anderson (Director of Forest Insect and Disease Research, Washington Office) and Murray Neilson (Director, Maritimes Forest Research Centre) assumed the chair as the Joint Planning Unit met at the Colorado State University summer campus at Pingree Park, July 23, 1980. The host, Jay Hughes, Dean of Forestry, Colorado State University selected a beautiful setting, 9000 feet high in the Colorado Rockies for the deliberations. The other attendees were: Brad Walker (Vermont State Forester), Tom Sterner (CFS Headquarters), Jim Stewart (FIDM, Washington Office), and Ross Macdonald (CFS, Victoria). Present to respond to questions about the program and to speak on action items and issues were the Program Leaders, Mel McKnight and Chuck Buckner. John Laut of the Colorado State Forest Service was present as an observer and Lou Paragon, Administrative Officer to Jay Hughes, served as rapporteur.

The CANUSA Program was reviewed, with emphasis on the revised Activity Schedule. An innovation in the current document places emphasis on combined activities of two or more components. Examples included the joint evaluation of B.t. by all components, the stand prognosis models being developed by CANUSA-West, and the development of pheromones as a control tactic by CANUSA-East. The JPU noted that the expected program accomplishments had been defined in more exacting terms and that the program, as a whole, was apparently on target with noticeable accomplishments to be expected. Some time was spent in explaining the implementation of the CFS Task Force Report and its impact on the program, including increased emphasis on detection and appraisal (with a special mention of the Petawawa National Forestry Institute's program on remote sensing), on socioeconomic components, and on biological and strategy modeling. The operational and "core" B.t. tests were cited as examples of excellent integrated approaches with promising results anticipated.

Additional agenda items included the human health aspects of budworm control operations, CANUSA Program evaluation, and several items raised by the Eastern Spruce Budworm Council. The next meeting was scheduled for July 29-30, 1981 in Fredericton. The meeting concluded with an informal get-together hosted by Mary Lou and Jay Hughes, with Bob Stevens (USDA Forest Service), Wayne Brewer (Colo. State University), and Jean Walker joining in.

The following day featured a field trip arranged by the Colorado State Forest Service. The group was met by Harold Wilson (CSFS) piloting a CSFS bus. On the descent from Pingree Park there were several stops to observe and photograph budworm damage,

and on the outskirts of Ft. Collins the group was introduced to Marv Strachan, Supervisor of the CSFS Nursery. Marv briefly reviewed the nursery program and showed the group its special features: — automatic container planting machines, optimum growth regulated greenhouses with movable aisles to add 25 percent more growing space, and mechanized fertilization. Before departure, each delegate was presented with an individual sample of budworm fodder (a Colorado blue spruce in planting container with planting instructions).

From the Nursery, Harold drove the group into the mountains again towards Estes Park, with numerous stops to observe budworm, mountain pine beetle, and needle miner damage.

Nick Moore, Manager of the Hewlett-Packard's 1200 acre Hermit Park, provided the refreshments for lunch and explained the budworm control program (Orthene and Sevin) over his management area, which is a green oasis in the predominately red surrounding forest area.

Bob Stevens added a bonus by showing a different *Choristoneura*. This one, on pines, was collected in his pheromone traps.

Following the field trip, the group assembled for dinner before going their separate ways. Tom Borden, State Forester, and his wife Rogine, as well as Peggy and Frank Hawksworth, Janet Laut, and Joyce Stevens enjoyed the evening as well. In his thank you words to the hosts, Murray Neilson assured them that everyone "had a ball."

## CANUSA Working Group Meetings

The Western CANUSA Working Group Meetings are scheduled for the week of October 20-24, 1980 at the Imperial Hotel, Portland, Oregon. For further information, contact Jim Colbert, Pacific Northwest Forest and Range Experiment Station, 809 NE Sixth Avenue, Portland, OR 97232.

Program participants are reminded that the next CANUSA-East Working Group Meetings will be held at the Executive Motor Inn (at the airport), Buffalo, New York during the week of October 27-31, 1980. An agenda for the meeting and reservation cards will be mailed later. Any questions should be directed to Bob Talerico, CANUSA-East, USDA-FS, 370 Reed Road, Broomall, Pennsylvania 19008.

## Manitoba Entomological Society Annual Meeting

The theme for this year's meeting (the 36th Annual Meeting) is "Predator Prey Relationships" with the focus on insects. The Scientific Program Committee is arranging for five speakers to address various

aspects of this subject in a symposium on Friday morning, November 14, 1980. The following experts have agreed to participate:

W.G. Franzine: insect predation by fish

N.J. Holliday: insect predation by insects

R. Zach: insect predation by birds

C.H. Buckner: insect predation by mammals

Bill Turnock has agreed to chair the symposium.

### **Forest Pest Control Forum**

The eighth annual Forest Pest Control Forum will convene in the Convention Centre, Ottawa, on November 18-20, 1980. For further information, contact Grant Davidson, CFS Headquarters, Place Vincent Massey, Hull, Quebec K1A 1G5.

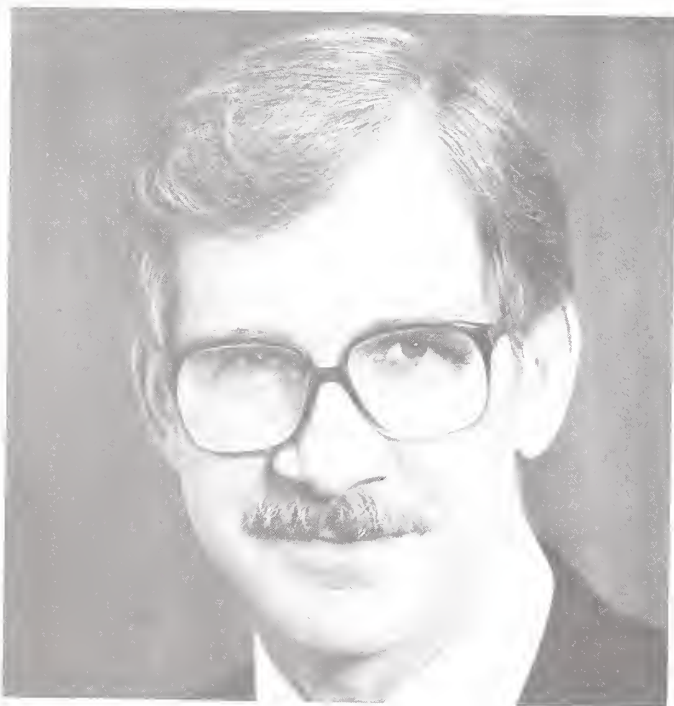
### **F.L.C. Reed Named Assistant Deputy Minister Of Canadian Forestry Service**

Environment Minister John Roberts announced, on behalf of the Public Service Commission, the appointment of F.L.C. (Les) Reed to the newly created position of Assistant Deputy Minister of the Canadian Forestry Service.

The appointment of an ADM, Forestry, raises the status of the Canadian Forestry Service, previously headed by a director general, to that of a separate service within the Department of the Environment.

"I believe that the appointment of Mr. Reed as Assistant Deputy Minister will provide the strong leadership the CFS needs to coordinate federal policies toward promoting better resource management and forest industry development," said Mr. Roberts.

Mr. Reed is widely known and respected in the forestry community in Canada and abroad. Up until his appointment as Assistant Deputy Minister of the Canadian Forestry Service, he was president of F.L.C. Reed and Associates Ltd., consulting forest economists of Vancouver, B.C.



Mr. Reed's focus during the last five years has been on forest management performance and forestry policy. He has worked with industry, provincial governments, federal agencies, trade associations, and labor unions in every province, conducting studies on various aspects of the forest sector, including Canada-wide studies dealing with forest resources and their management.

Mr. Reed has advised senior governments, international agencies, private companies, and advisory committees on policy matters and has presented briefs to royal commissions, regulatory agencies, federal-provincial task forces, and arbitration hearings. He has been a frequent speaker at national and international conferences on forestry matters. Overseas forest and economic studies have taken Mr. Reed to Europe, Asia, Africa, and Latin America where he has worked with the FAO, CIDA, Asian Development Bank, German Aid Bank, World Bank, and private companies.

Prior to the establishment of F.L.C. Reed and Associates Ltd. in 1971, Mr. Reed was director of price reviews for the Prices and Incomes Commission, Ottawa from 1969-1971. He was assistant manager and senior economist for Hedlin Menzies and Associates Ltd. consulting economists from 1967-1969; economist for the Council of Forest Industries of British Columbia from 1963-1967; and economist and statistician for Forest Industrial Relations Ltd., Vancouver from 1955-1962.

Mr. Reed was born and raised in a farming community near Three Hills, Alberta. He received a B.A. Economics from Lewis and Clark College, Portland, Oregon in 1954 and an M.A. Economics from the University of Oregon in 1959.

### **News Note**

Dr. Robert L. Talerico, Research Coordinator for the CANUSA-East Program, received a cash award for adapting and implementing a computerized research retrieval system to the needs of the CANUSA-East grants program, resulting in substantial savings in staff time and filing space. A Certificate of Appreciation was presented by the Program Manager following a small luncheon with the Staff and Dr. H.J. (Jack) Heikkinen, the guest of honor.

Jack was an associate of Bob when they both worked for the former Lake States Forest Experiment Station. He is Professor of Forest Entomology at Virginia Polytechnic Institute and State University, and coauthor of the fifth edition of McGraw-Hill's "Principles of Forest Entomology." He gave a seminar in the Broomall conference room on the effects of the forest environment on developing forest insect populations which he accompanied with a slide series of major forest insect pests in the continental United States. He further emphasized his theme by noting significant research relevant to forest practices that, if applied, could appreciably abate damage. Jack's platform skills were everywhere evident, not the least of which were nostalgic commentaries on forest entomologists past and present. He seems to have known or worked with them all.



## **Monitoring Spruce Budworms With Pheromone**

CANUSA-East is planning small field tests this summer as another step in developing the spruce budworm pheromone as a tool for use in monitoring low-level budworm populations. The objective is to gather preliminary data which can be used to plan a more comprehensive evaluation next summer (1981). Using a work plan written by Bob Talerico and Chris Sanders (GLFRC), pheromone traps will be placed in selected areas by Jerry Hecht in Minnesota, John Witter in Michigan, and Bruce Parker in Vermont. Spruce budworm larval density estimates, host defoliation estimates, and egg mass density estimates will be secured for each trapping area. Bob or Chris could supply further information to interested persons. They can be reached at: CANUSA-East, USDA-FS, 370 Reed Road, Broomall, Pennsylvania 19008 and GLFRC, P.O. Box 490, Sault Ste. Marie, Ontario P6A 5M7.

## **Budworm Pheromone As A Direct Control**

Spruce budworm pheromone applications may have some potential as a direct control agent for spruce budworm by confusing male moths and thus preventing successful mating. A field test in Maine this year, funded jointly by CANUSA-East, Maine Forest Service, Canadian Forestry Service, and the Hercon Group of Herculite Products, Inc., will evaluate Hercon flakes as a carrier for aerial dispersal of the pheromone. Three test blocks will be used; one as a no-treatment check, the other two as pheromone treatment blocks with vastly different concentrations of pheromone. Biological sampling will involve moth pheromone traps, caged moths, tethered moths, and egg mass density estimates. Atmospheric concentrations of pheromone in all three test blocks will be monitored. A decay curve will be determined for the pheromone concentration in the flakes. Bob Talerico, Chris Sanders (GLFRC), or John Dimond (UMO) can supply further information.

## **Spruce Budworm Automated Egg Mass Counter**

Drs. Dan Schmitt and Dan Jennings recently traveled to Missoula, Montana to enlist the aid of the USDA Forest Service Missoula Equipment Development Center in making the necessary modifications and refinements to the prototype model automated egg mass counter. The prototype was designed and built by Jennings, Carniglia, and Young at the University of Maine, Orono. A patent application has been filed on their behalf. Preliminary field tests of the prototype model last summer showed that the machine will detect egg masses with comparable accuracy to human counters, but with considerable savings in time and money. Questions should be directed to Dan Jennings, USDA Building, University of Maine, Orono.

## **B.t. Field Tests**

Two commercial formulations of *Bacillus thuringiensis*, or B.t. as it is called, (DIPEL 4L, Thuricide 16B) are being field tested at four different locations in the United States this year. Funding for this work is being shared by CANUSA, Abbott Laboratories, and Sandoz, Inc. Field researchers cooperating

with CANUSA on this effort, and the locations of the field tests will be: John Dimond, UMO, in Maine; Stanley Swire, UNH, in northern New Hampshire; Pat Shea, USDA-FS, in Wisconsin; and Milt Steltzer, USDA-FS, in Arizona. At each of the four locations, the researchers will conduct the tests and collect similar data, according to a uniform work plan. A composite report on these field trials will be prepared by Frank Lewis, USDA-FS, in the fall.

## **Spruce Budworm In Riding Mountain National Park, Manitoba**

A spruce budworm, *Choristoneura fumiferana*, infestation commenced in Riding Mountain National Park, Manitoba in 1977, and by 1979 had grown to 1420 km<sup>2</sup> (548 sq. miles) of defoliated forest. Surveys were conducted jointly by Parks Canada and Canadian Forestry Service staff in 1979 to assess the budworm abundance and tree damage after three consecutive years of severe defoliation. The surveys revealed 80 to 100 percent foliage loss occurred in both 1978 and 1979, severe bud and twig mortality in 1979, a reduction in radial stem growth, and the beginnings of top dieback on trees in all levels of crown strata. Assessment of foliage potential for 1980 was difficult because of an abundant production of adventitious buds, many appearing on shoots formed in 1977.

Egg mass density surveys conducted in 1979 indicated severe damage (over 1000 egg masses/10 m<sup>2</sup> (108 ft<sup>2</sup>) foliage) and high populations could again be predicted for 1980. Such populations did not materialize, and examination this spring revealed near total collapse of the outbreak with significant recovery of trees, characterized by prolific shoot growth of adventitious buds. The cause of the apparent collapse is uncertain since survival of overwintering larvae was not monitored.

It is suspected that high temperatures in late April, followed by a period of subfreezing temperatures in early May could have contributed significantly.

## **Orthene Safe For Fish**

The insecticide Orthene, once scheduled to be used on a controversial budworm spray program in B.C., will not kill fish in a lake unless tons of the chemical are put into the water, says a Simon Fraser University scientist. "Fish swim around as happy as hell in the stuff," Dr. Larry Albright of the university's biology department said, "You will never reach a lethal level for fish unless you spill tons of it into a lake." From Forest Scene, Vol. 11, No. 2, June 1980.

## **Student Develops New Foe To Beat Spruce Budworm**

A 16-year old Ottawa science student has developed an improved natural insecticide to fight the spruce budworm.

David Schneider, a grade 10 student, has improved the efficiency of B.t. up to 20 percent. "My results might be able to aid the (forestry) industry because they are trying to switch away from chemical pesticides," he said in an interview. "The advantages are that the bacteria are known not to harm pollinating insects or humans." Although his work is still preliminary, a Toronto-based company, ENS Biological Inc., has offered Schneider a summer job to do further testing in its laboratories.

### Personnel

In July 1980, the Quebec Department of Energy and Resources announced the nomination of Mr. J.C. Mercier as associate deputy minister. Formerly, Mr. Mercier was Director of Groupe de Conseil Gestion Forestière (COGEF), Quebec. He also is cochairman of the Integrated Pest Management (IPM) Planning and Decision Modeling Working Group in CANUSA.

And the Forest Pest Management Institute (FPMI), Sault Ste. Marie, Ont., will be losing Bob Deboo in September. Bob has accepted an appointment as Forest Pest Manager with the British Columbia Forest Service.

### Recent Publications

The Pacific Northwest Forest and Range Experiment Station (809 NE Sixth Avenue, Portland, Oregon 97232) has issued General Technical Report PNW-100 authored by Jerry A. Powell. It deals with the nomenclature of the genus *Choristoneura*, with an historical review and the present status.

### Change Of Postal Code

The Postal Code for the Canadian Forestry Service Headquarters has been changed to K1A 1G5. Please make the appropriate correction on your mailing lists.

### New Phone Numbers

CANUSA-East Program Management staff at Broomall, Pennsylvania have recently received new phone numbers.

The new commercial number is: 215-461 + extension

The new FTS number is: 489 + extension

The extension number is: 3017